

Our game takes place in a dark and gloomy dungeon filled with traps, and inhabited by nefarious monsters, namely venomous bats and spiders. Our protagonist, a young man, seeks to escape the dungeon by collecting all of the key fragments scattered around the dungeon in order to form a key, and then reaching the exit.

Our dungeon is represented by a game board in the form of a 2D grid with both a width and height of 32 cells, surrounded by walls. The various cells in the game board consist of the starting and ending cells, walls, monsters, traps, key fragments, gold coins, invisibility mushrooms, speed potions, or nothing. Our player spawns at the starting cell and can move in any of four directions, whether left, right, up or down, unless that cell consists of a wall or an enemy. Each time our player makes a move, the monsters move in a direction making them closest to our main character. Our game keeps track of the time elapsed since the start of the game, as well as the player's current score, which increases as key fragments are collected, or decreases by walking into a trap. Furthermore, the game contains three types of bonus rewards which randomly span on particular cells for a limited amount of time. None of these bonus rewards are necessary for the player to escape from the dungeon, but they all offer various advantages or abilities. The first type of bonus rewards are gold coins, which simply raise the player's score higher than collecting key fragments and offer the player additional insurance against the game ending by the total score dropping below zero. The second type of bonus rewards are invisibility mushrooms, which offer the player invisibility for a very limited amount of turns, meaning that the monsters momentarily lose their ability to track the player. The third type of bonus rewards are speed potions, which allow the player to move twice instead of once per turn, for a few turns. Finally, the game can end in various ways. The player wins by reaching the end cell of the game board, or loses by moving to a cell containing a monster, being caught by a monster, or having the player's total score drop below zero as the result of walking into a trap. The game's theme and general atmosphere are loosely inspired by 2D action-adventure video games such as The Legend of Zelda for NES.

In terms of our approach to building the game, we first made a distinction between animate and inanimate classes, both of which are aggregates of the cells on the dungeon's game board. The animate classes are represented by a moving character class, with subclasses for a moving character, namely the protagonist, and moving enemies, consisting of the bats and spiders. The inanimate classes are represented by an unmoving item class including both regular and bonus rewards, in the forms of key fragments and gold coins, invisibility mushrooms and speed potions, as well as barriers in the form of walls and punishments in the form of traps. The game's UI consists of a start menu with buttons for starting, options and quitting the game, as well as a pause menu with a volume slider and various language options.

Concerning the division of roles and the overall management process of the project, we plan on having two of our team members focusing on developing animate classes, and the other two members focusing on developing the inanimate classes. We hold two regular weekly meetings at scheduled times every Tuesday and Wednesday, which every team member attends. If a team member is unable to make it to a particular meeting, we summarize anything discussed during the meeting, including plans and our general progress, through messages in a group chat. In this manner, our team is constantly updated on recent progress and can continue working together without any communication or coordination-related issues.